

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

RECEIVED
CENTRAL FAX CENTER

OCT 11 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A solid-state image sensing device comprising:
a plurality of groups of ~~sensors~~ sensor devices, each of the group of ~~sensors~~ sensor devices comprises a at least one line of pixels and a at least one charge-transfer part for further transferring signal ~~charge~~ charges ~~to be~~ read-out from each pixel of the line of pixels; and
wherein a time in which it takes to read-out signal charges from each pixel in the pixel line and transfer the charges to one end of the charge-transfer part is different for at least one of said groups of sensor devices out of said plurality of groups of sensor devices; and
driving means, ~~by which, in case of read-out of the signal charge is performed at a different timing between each of said plurality of groups of sensors, wherein during a read-out period of a first group of sensors~~ sensor devices, ~~stepping stops charge-transfer driving of the signal charge of a second group of sensor devices sensors is performed by said driving means.~~
2. (Currently Amended) A solid-state image sensing device according to Claim 1, wherein said groups of ~~sensors~~ sensor devices are formed on the same chip.
3. (Currently Amended) A solid-state image sensing device according to Claim 1,

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

wherein ~~a reading period of the signal charge from said line of pixels to said charge-transfer part in said plurality of groups of sensors~~ said time in which it takes to read-out signal charges from each pixel in the pixel line and transfer the charges to one end of the charge-transfer part is different for each group of ~~sensors~~ sensor devices.

4. (Currently Amended) A solid-state image sensing device according to Claim 1, wherein said driving means further comprises charge-transfer driving of at least a final transfer stage of the charge-transfer part in said ~~either first~~ first group(s) of ~~sensors~~ sensor devices during the period when the remainder of the charge-transfer driving of the signal charge in said ~~either second~~ second group(s) of ~~sensors~~ sensor devices is stopped.

5. (Currently Amended) A solid-state image sensing device according to Claim 1, wherein said driving means further comprises restarting of transfer driving of the signal charge in said ~~either second~~ second group(s) of ~~sensors~~ sensor devices in accordance with the output timing of said first group of ~~sensors~~ sensor devices.

6. (Currently Amended) A method for driving a solid-state image sensing device, the image sensing device comprising a plurality of groups of ~~sensors~~ sensor devices, each of the group of ~~sensors~~ sensor devices comprises a at least one line of pixels and a at least one charge-transfer part for further transferring a signal ~~charge-to-be~~ charges read-out from each pixel of the line of pixels, wherein a time in which it takes to read-out signal charges from each pixel in the pixel line and transfer the charges to one end of the charge-transfer part is different for at least one of said groups of sensor devices out of

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

said plurality of groups of sensor devices, the driving method comprises stopping transfer driving of the signal charge of a second group of ~~sensors~~ sensor devices wherein during a read-out period of a first group of sensor devices ~~sensors in case of read out of a signal charge at a different timing between each of said plurality of groups of sensors is~~ performed.

7. (Currently Amended) A method for driving a solid-state image sensing device according to Claim 6,

wherein said groups of ~~sensors~~ sensor devices are formed on the same chip.

8. (Currently Amended) A method for driving a solid-state image sensing device according to Claim 6,

wherein ~~a reading period of the signal charge from said line of pixels to said charge transfer part in said plurality of groups of sensors~~ said time in which it takes to read-out signal charges from each pixel in the pixel line and transfer the charges to one end of the charge-transfer part is different for each group of ~~sensors~~ sensor devices.

9. (Currently Amended) A method for driving a solid-state image sensing device according to Claim 6,

wherein charge-transfer driving of at least a final transfer stage of the charge-transfer part in said ~~other~~ first group of sensors sensor devices is continued during the period when the ~~remainder of the transfer driving of the signal charge in said other~~ second group of sensors sensor devices is stopped.

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

10. (Currently Amended) A method for driving a solid-state image sensing device according to Claim 6,

wherein restarting of transfer driving of the signal charge in said ~~other~~ second group of sensors is in accordance with the output timing of said first group of ~~sensors~~ sensor devices.

11. (Currently Amended) An image scanner comprising a solid-state image sensing device for an image sensor to read a document image, the solid-state image sensing device comprising:

a plurality of groups of sensors sensor devices, each of the group of ~~sensors~~ sensor devices comprises a line of pixels and a charge-transfer part for further transferring signal ~~charge to be~~ charges read-out from each pixel of the line of pixels; and

wherein a time in which it takes to read-out signal charges from each pixel in the pixel line and transfer the charges to one end of the charge-transfer part is different for at least one of said groups of sensor devices out of said plurality of groups of sensor devices; and

driving means, ~~by which, in case of read-out of the signal charge is performed at a different timing between each of said plurality of groups of sensors, wherein during a read-out period of a first group of sensors~~ sensor devices, stopping stops charge-transfer driving of the signal charge of a second group of sensor devices ~~sensors is performed.~~

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

12. (Currently Amended) An image scanner comprising a solid-state image sensing device for an image sensor to read a document image, the solid-state image sensing device comprising:

at least a first group of ~~color-sensors~~ color-sensor devices and a second group of ~~monochrome-sensors~~ monochrome-sensor devices formed on the same chip, each group of ~~sensors~~ sensor devices comprising a at least one line of pixels and a at least one charge-transfer part for further transferring signal ~~charge-to-be~~ charges ~~read~~ read-out from each pixel of the line of pixels; and

driving means which stops charge-transfer driving of the signal charges of the charge-transfer part of the color-sensors during a reading period of the monochrome-sensors.

13. (Currently Amended) A solid-state image sensing device according to Claim 1, wherein the pixels of said first group of ~~sensors~~ sensor devices and said second group of ~~sensors~~ sensor devices comprise photodetectors.

14. (Currently Amended) A method for driving a solid-state image sensing device according to Claim 6, wherein the pixels of said first group of ~~sensors~~ sensor devices and said second group of ~~sensors~~ sensor devices comprise photodetectors.

15. (Currently Amended) An image scanner according to Claim 11, wherein the pixels of said first group of ~~sensors~~ sensor devices and said second group of ~~sensors~~ sensor devices comprise photodetectors.

Appl. No. 10/022, 708
Amdt. Dated October 11, 2006
Reply to Office Action of July 11, 2006

16. (Currently Amended) An image scanner according to Claim 16, wherein the pixels of said first group of ~~color-sensors~~ color-sensor devices and said second group of ~~monochrome-sensors~~ monochrome-sensor devices comprise photodetectors.